Biofuels Marketing Plan

Submitted to the Iowa General Assembly on March 16, 2009

In 2007, Governor Culver and the Iowa General Assembly created the Office of Energy Independence (OEI) and the Iowa Power Fund to accelerate Iowa's leadership in renewable energy development and energy efficiency implementations. Since its inception, OEI has set the strategic direction for Iowa's clean energy future by identifying goals to achieve desired results. OEI is aligning state government efforts for achieving energy independence through partnerships with business and industry, community leaders, government and public agencies, and other stakeholders. OEI focuses on implementing the Energy Independence Plan, as well as guides and supports the activities surrounding the Power Fund.

Executive Summary

A primary focus for OEI is to support the leadership role Iowa plays in the biofuels industry. OEI also recognizes the immediate need to increase demand for biofuels in order to support this important industry in Iowa. Through legislation enacted in 2008, OEI was charged with creating and implementing a plan to market biofuels across the state of Iowa. OEI has been collaborating with industry leaders and commodity associations to determine the barriers and strategies to increase biofuels demand. The various methods for increasing demand could include: direct marketing, advertising, and other promotional efforts aimed to educate consumers regarding the benefits of biofuels. OEI, in collaboration with stakeholders, has also held a series of meetings and workshops, to discuss ethanol infrastructure and market development. OEI is also collaborating with the biodiesel industry to hold similar meetings and workshops.

Background

Fluctuating Costs

Over the last three years, the global energy circumstances have changed dramatically. The fluctuating prices of fossil fuels, shifting international political dynamics, and increased consumption of energy have driven energy costs to all time highs. New industries developed in response to these needs have resulted in a new energy dynamic in Iowa. Still, Iowa continues to rely heavily on imported energy. In 2004, Iowa imported 95.4% of its energy resources, and these numbers have remained relatively unchanged.

Heavy consumption of imported energy from other states and nations is particularly troublesome given fluctuating costs and demand risks worldwide. Iowa's energy expenditure in 2005 was $12.5 billion; the highest expenditure ever recorded until that time. Increases in the state's energy costs are attributed to higher petroleum and natural gas prices. Projections for the coming year's energy costs are significantly higher.

Ethanol and Biodiesel

As a counter to these costs, Iowa has become the leading producer of both ethanol and biodiesel. As of March 2009, there are thirty-eight ethanol refineries in Iowa with an annual production capacity of over 3 billion gallons. Similarly, Iowa's fourteen biodiesel refineries have the capacity to produce 317 million gallons annually. These capabilities

certainly help, but current economic conditions have lead to a slowdown in production in both the ethanol and biodiesel industry, which is of serious concern due to the economic, environmental, and energy security benefits biofuels provide. OEI is engaged in collaboration at the state and federal level to ensure biofuels viability.

As biofuels struggle with economic realities, media criticisms, and strong opponents to the adoption of biofuels, Iowa's participation in the national energy discussion becomes increasingly more important. Strong federal policies coupled with strong state and local government support are keys to the industry's survival. Current leadership roles in organizations like the Governors' Biofuels Coalition are a way to address this developing issue.

Biofuels Infrastructure and Market Barriers

Biodiesel Barriers:

Feedstock Prices

According to the Energy Information Administration, the single largest component of biodiesel production costs is the feedstock cost of production inputs. Feedstock costs are of critical importance to the biofuels industry and many biodiesel facilities use more than one feedstock to help reduce costs. Due to increased feedstock cost it has become challenging for the biofuels industry to compete with transportation fossil fuel.

Quality and Performance Perceptions

Some fuel retailers are hesitant to offer biodiesel because of the negative perceptions about biodiesel fuel quality and performance. Cold flow issues are significant barriers to usage within the transportation industry, and educational efforts should be targeted to bus systems, rail, medium- to heavy-duty trucks, and barges. Biodiesel industry leaders have been working to address this issue including the development of the BQ-9000 certification for quality assurance and retailer education on seasonal blending changes (20% biodiesel in the summer and 5% biodiesel in the winter).

Ethanol Barriers:

Current Flex Fuel Vehicle Owners

One barrier to selling E85 and other ethanol blends higher than 10 percent is the lack of knowledge and awareness among current flex fuel vehicle (FFV) owners. While E85 and ethanol sales are increasing and there are currently 90,000 registered FFVs in Iowa, many FFV owners are not currently using high blends of ethanol. Many FFV owners have stated in surveys that E85 is not available, specifically in metro areas like Des Moines and Davenport where there are high concentrations of FFVs but lower numbers of E85 retailers. Reports have also indicated that many FFV owners with model years earlier than 2002 are not likely to know they have an FFV or that they can use E85.

Profitability

Some retailers are hesitant to offer E85 because of the limited FFV market. The price of E85 is also very closely linked to gasoline prices; it sells well when gas prices are high, but sales are low when gas prices are low. The installation of E85 can also be expensive to finance, even with grants and loans available through state and federal

programs. The costs are estimated at $5,000 to retrofit an existing dispenser to over $100,000 for a new installation. Installing E85 in areas where high numbers of FFVs are concentrated is a crucial aspect of ethanol deployment.

Installation Requirements
Beyond the cost of installation, Iowa maintains strict requirements to protect the environment and consumers. Iowa also requires that E85 retailers use equipment to dispense and store E85 to be certified by Underwriter's Laboratory (UL). This requirement has also been a barrier to installation because UL has not approved any products that store or dispense E85. Retailers can work with the State Fire Marshal's office to obtain a temporary waiver for this law. However, in the event that UL does approve a product, retailers will have a limited time to replace the dispensing and storage equipment, increasing the costs associated with installation.

Biofuels Efforts: Current Office Programs and Initiatives
Energy Independence Plan
Each year, OEI submits a plan to achieve energy independence in the state of Iowa and works throughout the year to implement policies and programs to achieve this goal. In December 2008, OEI submitted its second plan for energy independence, which contains specific policy recommendations to support the biofuels industry including:

- Enhance the economic and environmental viability of the biofuels industry;
- Develop a biomass feedstock supply infrastructure for second generation biofuels;
- Support development and deployment of integrated biorefineries; and
- Improve the analysis used to develop greenhouse gas performance measures.

OEI continues to focus on the policy recommendations in the 2008 Energy Independence Plan.

Leading by Example: Executive Order Six
Governor Culver signed his sixth executive order on February 21, 2008. This executive order established the Green Government Initiative, and the Director of the OEI was appointed to chair the Green Government Steering Committee. As part of these efforts, coordinators were appointed by the director of each state agency to implement the Green Government Initiatives within their own agencies, and task forces were formed to set measureable goals to achieve these initiatives.

The Biofuels Task Force will set five-year and ten-year targets for the use of biofuels by state agencies, the reduction of vehicle usage by state employees, and the increase of fuel efficiency standards for the state vehicle fleet.

All task forces associated with the Executive Order recently completed a renewable energy survey. The results of the survey are expected in spring 2009. The Green Government Steering Committee pledged to develop a Green Government Master Plan from the results of these surveys. Once completed, the plan will outline steps for developing and implementing policies to promote environmentally sustainable and economically efficient practices.

A key component to the success of these initiatives will be the Biofuels coding. It is especially essential to the tracking and usage of high blend ethanol by large fleets of vehicles, including the state fleet. Advanced tracking of biofuels sales will help agencies enforce and enact policies designed to encourage State of Iowa employees to use biofuels. OEI is collaborating with the Iowa Department of Economic Development's Renewable Fuels Infrastructure Program to implement administrative rule changes to encourage proper coding systems at the retail level.

Iowa Clean Cities Coalition
The Iowa Clean Cities Coalition seeks to build strong, self-sustaining partnerships with industry, stakeholders, fleets, fuel suppliers, and business partners with the goal of decreasing petroleum use. The program focuses on alternative fuels and alternative fuel vehicles, hybrid electric vehicles, fuel blends, heavy-truck idle reduction applications, and general fuel economy improvements. OEI has been using the Coalition program to leverage federal dollars to increase infrastructure and for encouraging the greater use of biofuels in the state. The Coalition is continually looking for new partners to drive energy independence for Iowa.

The Power Fund
In 2007, Governor Culver and the Iowa General Assembly created the Iowa Power Fund to promote the goals of energy independence. The Fund is to be used to provide financial assistance to applicants conducting research and development early commercialization, and education. In return, these entities are expected to accelerate research and development, transfer knowledge, and innovate technology. The Board has funded five biofuels projects, including second generation ethanol production, as well as biodiesel feedstock and quality research.

Every year, $2.5 million of the Fund is also distributed to Iowa's community colleges to encourage the development and expansion of the state's energy industries. Many community colleges have established programs to train students in the biofuels industry including the development of biofuels laboratories.

Biofuels Efforts: Future Programs and Initiatives
Ethanol Marketing and Infrastructure Development Funding Opportunities
To assist with E85 market and infrastructure build out, OEI will apply for currently available, and future federal grant funding that will help target the metro areas of Des Moines and Davenport. Several meetings have already taken place in Davenport and Des Moines to engage automakers, retailers, commodity associations, and industry associations to most effectively target marketing and infrastructure efforts.

OEI is currently pursuing is a $500,000 grant from the U.S. Department of Energy for E85 infrastructure development. The goal of this project, entitled IOWA E85 - City to Region Market Development, is to build E85 fuel infrastructure in the Des Moines – Davenport corridor of eastern Iowa. The project will involve either retrofitting existing fuel tanks or installing new ones at public gasoline stations and truck stops in the target region. Several strategically-located fueling stations have already expressed their interest in participating in this project.

Within two years of completing the project, the goal is to encourage public and private commuters along that corridor to purchase E85 from these stations, displacing the equivalent amount of gasoline.

The proposed project includes providing assistance to station owners in the process of:

- Exploring the advantages of having an E85 fueling pump at their station;
- Planning or retrofitting at least one fueling station to provide E85 to the public, including giving equal signage advertising E85 availability along with the other grades of gasoline;
- Notifying their local market about the availability of the new fueling station;
- Collecting and reporting data required through this program on a quarterly basis for two years after the station is opened or the upgrading or modifying of the existing station is complete, and supplying that data to the DOE.

OEI will also work with the Iowa Department of Economic Development's Renewable Fuels Infrastructure Program to ensure the success of Iowa's E85 infrastructure development.

Biodiesel Marketing and Infrastructure Opportunities
Legislation has been proposed to require diesel fuel sold in Iowa to contain a biodiesel. This piece of legislation will have an impact on how biodiesel is marketed in the state of Iowa.